

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

FEB 4 1970

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE
and
OREGON STATE UNIVERSITY
and
STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
JAN. 1, 1970

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



235913

WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

JANUARY 8, 1970

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

|||||
Released by

A. J. WEBBER

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PORTLAND, OREGON

In Cooperation with

G. BURTON WOOD

DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

CHRIS L. WHEELER

STATE ENGINEER
STATE OF OREGON

|||||
Report prepared by

TOMMY A. GEORGE, Snow Survey Supervisor

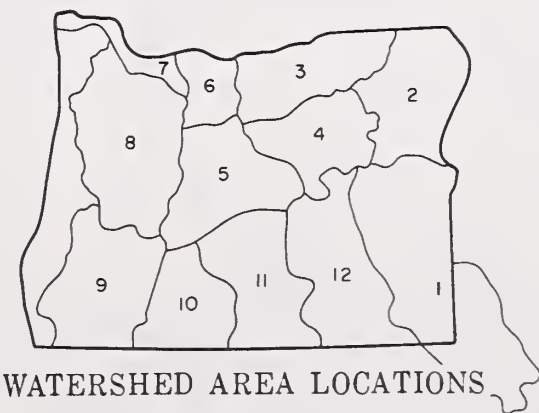
and

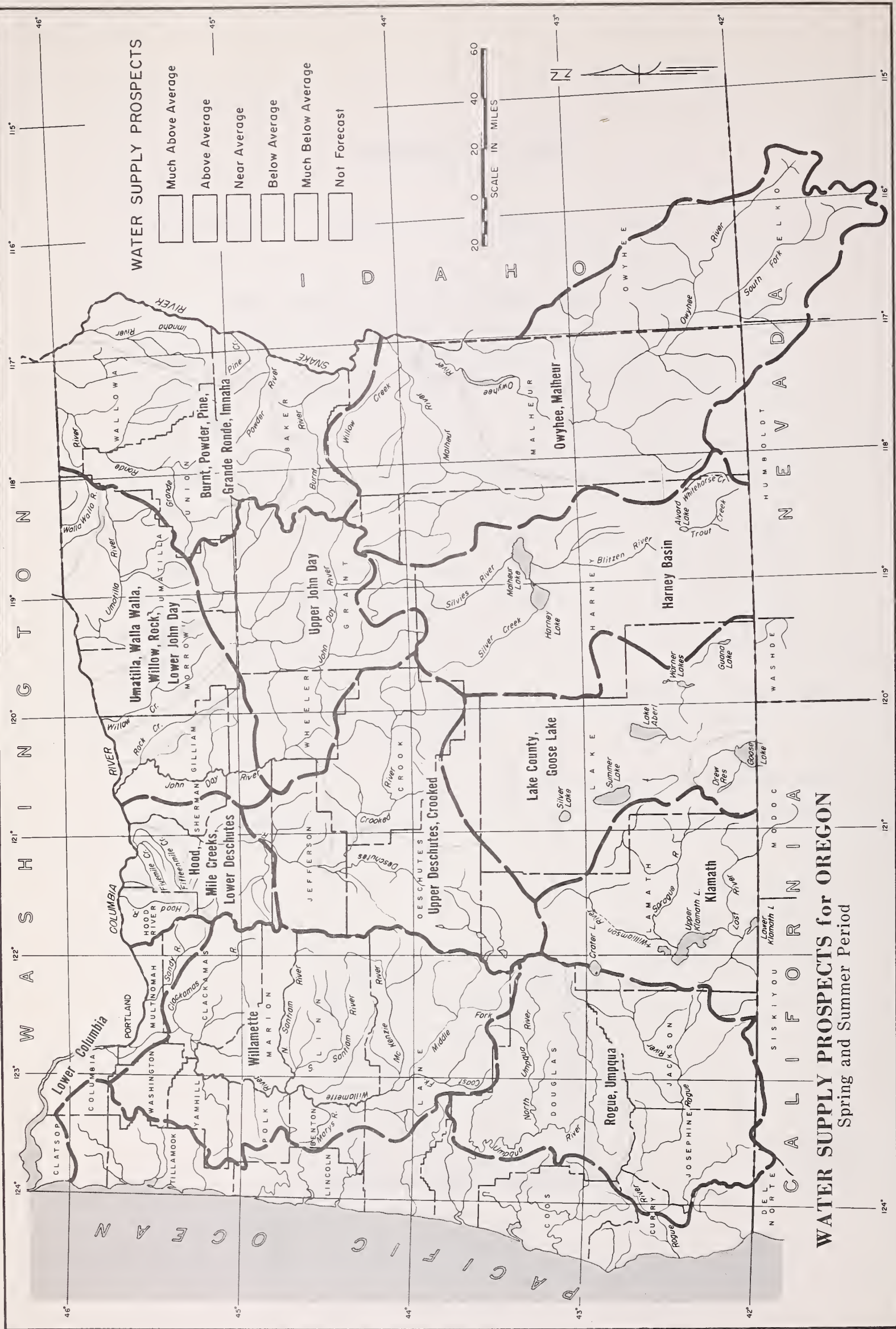
HOWARD M. VANCE, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS	
OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
BASIC DATA SUPPLEMENTS	
I	SNOW
II	SOIL MOISTURE
III	PRECIPITATION
IV	AUTOMATIC STATION DATA
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....INSIDE BACK COVER	





WATER SUPPLY PROSPECTS

- Much Above Average
- Above Average
- Near Average
- Below Average
- Much Below Average
- Not Forecast

WATER SUPPLY PROSPECTS for OREGON
Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1970

Generally Oregon's water supplies next summer will be above average and average in the southeast part of the State and the northern Cascades. Below average prospects are seen for the central and southern Cascades, central Oregon and in the northeast corner of the State. Stored water supplies are good and will see many irrigators through the summer season. Snowpacks increased considerably the last two weeks of December and now range from 60 per cent of normal to above average.

SNOW COVER

Snow ranges from 120 per cent of average in Malheur County down to 60 per cent in Klamath and Lake Counties. Snow cover is near 80 per cent of average in the Rogue, Umpqua, Upper Willamette and Deschutes watersheds in addition to the northeastern corner of the State. The Mt. Hood area, Harney basin, John Day River watershed and Baker County have snowpacks near average for January 1.

SOIL MOISTURE

Soil moisture is near average except for the south central or southeastern parts of the State and should not detract much from the snowmelt runoff.

PRECIPITATION

Precipitation during December was excellent over the whole state. Amounts received varied from 150 to 180 per cent of normal in Malheur and Lake Counties to 110 per cent in the Burnt, Grande Ronde, Willamette and Deschutes drainages.

RESERVOIR STORAGE

Reservoir storage is better than it has been for the past several years. On January 1, 25 reservoirs were storing 1,808,000 acre feet. This is 113 per cent of average. Last year at this time they contained 1,140,000 acre feet. This improvement is due to last year's heavy snowpack and resultant excellent streamflow runoff.

continued on next page

continued--

STREAMFLOW

Oregon's streams were flowing at near average volumes in the early fall but due to dry and windy weather in November and early December they have dropped off rapidly.

Winter runoff to date is represented by the following streams:

<u>Stream</u>	<u>Oct.-Dec. Volumes as Per Cent of 1953-67 Average</u>
Owyhee net Inflow	82
John Day at Service Creek	60
Deschutes at Moody	84
Grande Ronde at La Grande	36
Willamette, Mid. Fk. below N. Fk.	70
Umpqua near Elkton	77
Rogue at Raygold	72
Upper Klamath net Inflow	82

*This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, U. S. Weather Bureau and other cooperators.





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS

OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

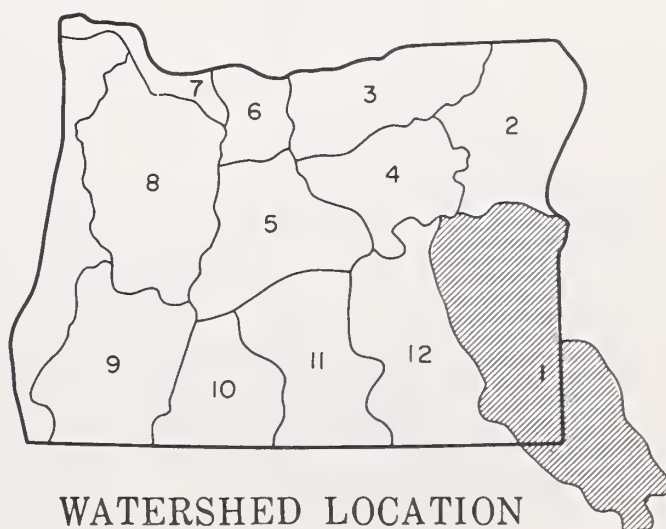
GENERAL OUTLOOK

WATER SUPPLIES SHOULD BE GOOD NEXT SUMMER. MOUNTAIN SNOWPACKS ARE ABOVE NORMAL. PRECIPITATION DURING DECEMBER WAS 150%. SOILS AT THIS TIME, HOWEVER, ARE DRIER THAN THEY HAVE BEEN FOR THE PAST SEVERAL YEARS WITH MOISTURE 75% OF AVERAGE. RESERVOIRED WATER SUPPLIES ARE ABOVE AVERAGE FOR THIS TIME OF YEAR. RUNOFF INTO OWYHEE RESERVOIR FROM OCTOBER 1 TO JANUARY 1 HAS BEEN 82% OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	
Bully Creek		
Cow Creek		
Jordan Creek		
Jordan Valley Irrig. Dist.		
McDermitt Creek		
Owyhee Project		
Succor Creek		
Tennile Creek		
Vale-Oregon Irrig. Dist.		
Warm Springs Irrig. Dist.		
Willow Creek (Reservoired)		



WATERSHED LOCATION

STREAMFLOW FORECASTS

PAST RECORD		THIS YEAR		BASIN, STREAM and/or FORECAST POINT		
FORECAST		FORECAST		Percent of Average of	Thousand Acre Feet	B
THOUSAND ACRE FEET		PERIOD				
Last Year		Average 1				

Jordan Creek above Lone Tree Creek
Malheur near Drewey
Malheur, North Fork at Beulah
Owyhee Reservoir net Inflow

c
c
c
c

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
----------------	---------------------------------	---	--------------------------------------

Forecasts begin in
the February 1
report which will
be issued about
February 10, 1970.

RESEVOIR STORAGE (Thousand Ac. Ft.)	Usable Capacity	Usable Storage		
		This Year	Last Year	Average 1

Agency Valley	60.0	13.5	9.9	17.4
Antelope	55.0	3.2	6.9	4.0
Bully Creek	30.0	8.0	8.9	-
Owyhee	715.0	468.9	174.9	330.8
Warm Springs	191.0	71.4	14.4	62.0

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

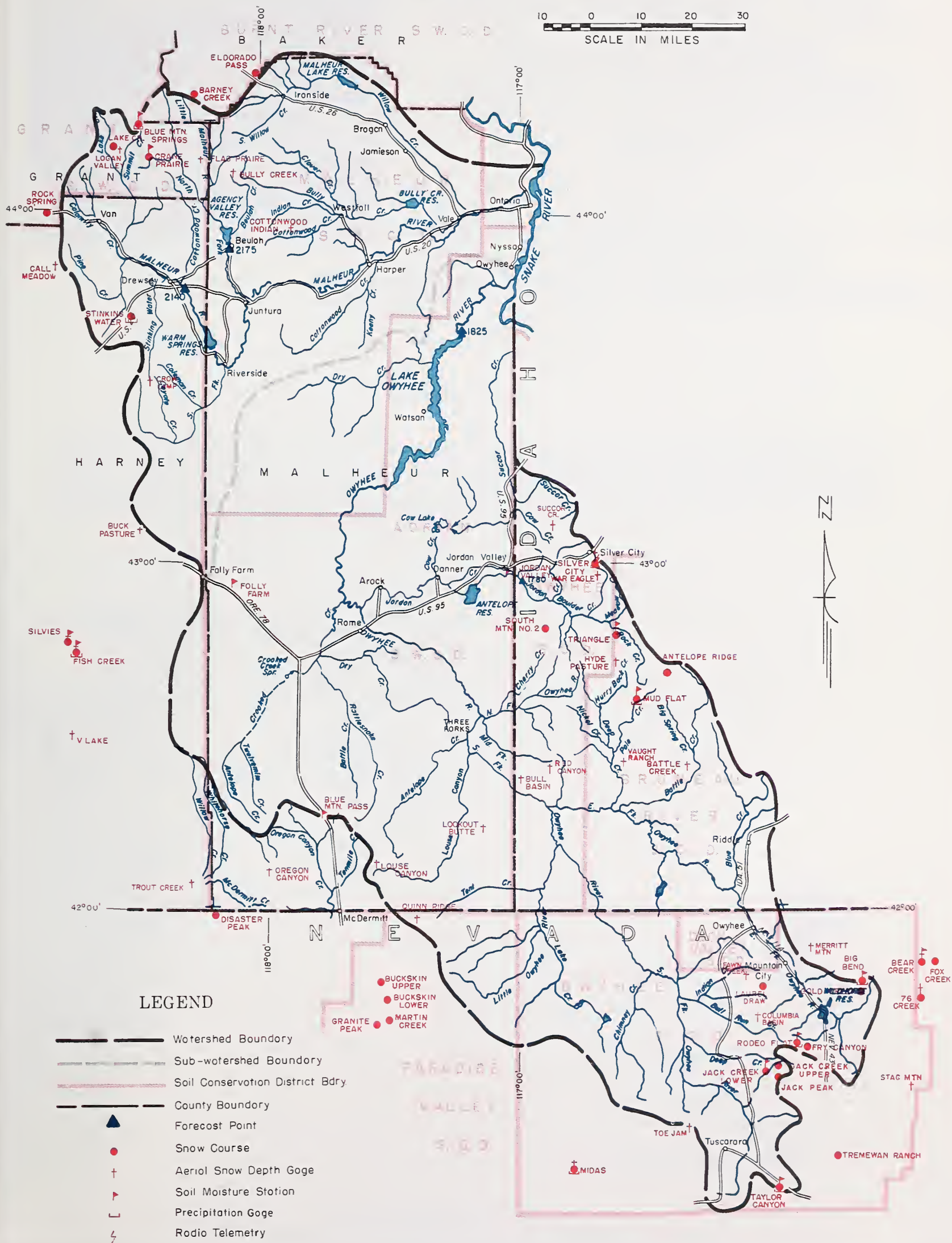
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		SUB-BASIN and/or RIVER BASIN	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average 1			Last Year	Average 1

Owyhee	2	74	72	Owyhee	3	57	123
Jordan Creek	1	67	73	Jordan Creek	2	64	112
Malheur				Malheur	4	89	123

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural

OWYHEE, MALHEUR WATERSHEDS







WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of
JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

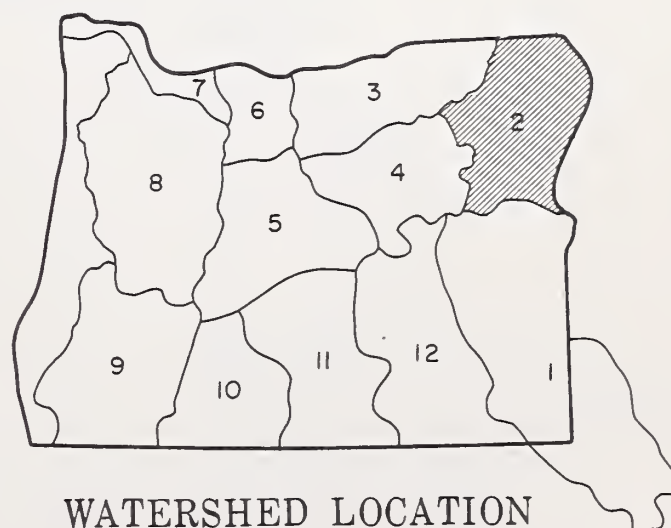
GENERAL OUTLOOK

WATER SUPPLY PROSPECTS ARE GOOD ON THE POWDER AND BURNT RIVERS AND BELOW AVERAGE ELSEWHERE. THE SNOWPACK RANGES FROM 50% OF AVERAGE TO 100% OF AVERAGE. PRECIPITATION DURING DECEMBER WAS 113% OF NORMAL. MOUNTAIN SOILS ARE WETTER THAN USUAL IN THE NORTH HALF OF THE AREA AND NEAR AVERAGE MOISTURE IN THE SOUTH HALF. STORED WATER IS BELOW AVERAGE. FLOW OF THE GRANDE RONDE AT LA GRANDE WAS 40% OF NORMAL FOR THE OCTOBER TO DECEMBER PERIOD.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope Baker Valley Big Creek Clover Cr. (nr. N. Powder) Cove Durkee Eagle Valley Elgin Enterprise-Joseph Hereford-Bridgeport Imnaha River La Grande-Island City Lostine-Wallowa No. Powder River-Wolf Cr. Pine Valley Powder River-Elk Creek Summerville Sumpter Valley Union-Hot Lake Unity	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Bear near Wallowa					
Burnt near Hereford ^d					
Catherine near Union					
Eagle Creek above Skull Creek					
Grande Ronde at La Grande					
Hurricane near Joseph					
Imnaha at Imnaha					
Lostine near Lostine					
Powder near Baker					
Wallowa, East Fork near Joseph ^d					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Grande Ronde, Catherine Creek, Imnaha River	3	105	116
Burnt, Powder	2	100	89

RESERVOIR STORAGE (Thousand Ac. Ft.)

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Thief Valley	17.4	13.8		
Unity	25.2	8.0	8.6	6.5
Wallowa Lake	37.5	10.4	26.5	20.5
Phillips Lake	73.5	26.9	7.1	- -

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Wallowa, Imnaha, Catherine Creek	1	63	74
Powder	3	60	87
Burnt	4	82	105

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bay.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Soil Moisture Station
- † Aerial Snow Depth Gage
- ⌋ Precipitation Gage





WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

Area 3

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
 OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

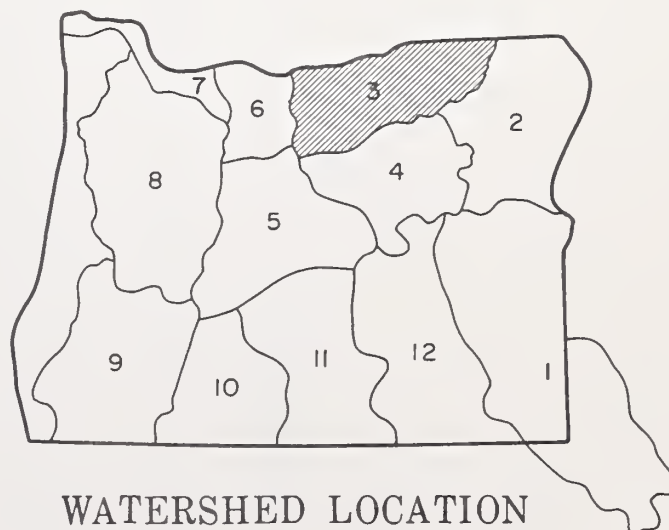
GENERAL OUTLOOK

WATER SUPPLY PROSPECTS ARE NEAR AVERAGE. SNOWPACKS ARE CLOSE TO NORMAL FOR THIS TIME OF YEAR. STORMS AFTER THE SNOW MEASUREMENTS WERE TAKEN BROUGHT THE PACK TO NEAR AVERAGE. ALTHOUGH PRECIPITATION DURING DECEMBER WAS 116% OF NORMAL, SOIL MOISTURE IS NEAR AVERAGE FOR JANUARY 1. STORED WATER IS ABOVE AVERAGE IN MC KAY RESERVOIR AND BELOW AVERAGE IN COLD SPRINGS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fk.	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	
Walla Walla River, So. Fk.		
Walla Walla River, Main		
Walla Walla River, Little		
Couse Creek		
Dry Creek		
Pine Creek		
Umatilla River, Main		
Wildhorse Creek		
Umatilla R. (Cold Springs Reservoir)		
Umatilla River (McKay Res.)		
McKay Creek		
Birch Creek		
Butter Creek		
Willow Creek		
Rhea Creek		
Rock Creek (John Day tributary)		



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Butter Creek near Pine City McKay near Pilot Rock Umatilla near Gibbon Umatilla at Pendleton Walla Walla, North Fork near Milton Walla Walla, South Fork near Milton					
NOTE: FORECASTS BEGIN ON FEB. 1, 1970.					

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Umatilla, Walla Walla, McKay Creek	3	96	100

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cold Springs	50.0	12.3	24.5	20.2
McKay	73.8	28.3	13.7	16.1

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Walla Walla	2	54	105
Umatilla	3	44	80
McKay	2	19	42

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS





WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

JANUARY 1, 1970



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

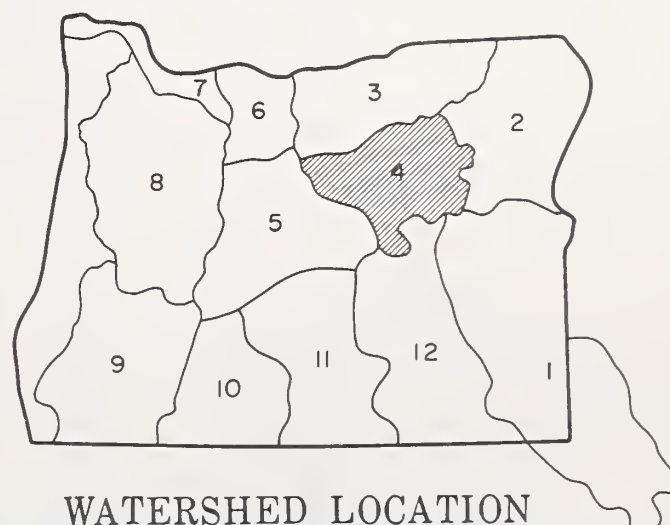
GENERAL OUTLOOK

WATER SUPPLIES SHOULD BE NEAR AVERAGE THIS SUMMER. THE MOUNTAIN SNOWPACK IS NEAR NORMAL FOR JANUARY 1. SOIL MOISTURE IS AVERAGE EVEN THOUGH DECEMBER PRECIPITATION WAS 138% OF NORMAL. RUNOFF OF THE JOHN DAY AT SERVICE CREEK FOR THE OCTOBER TO DECEMBER PERIOD HAS BEEN 60% OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
John Day at Prairie City					
John Day, Middle Fork at Ritter					
Strawberry near Prairie City					
NOTE: FORECASTS BEGIN ON FEB. 1, 1970.					

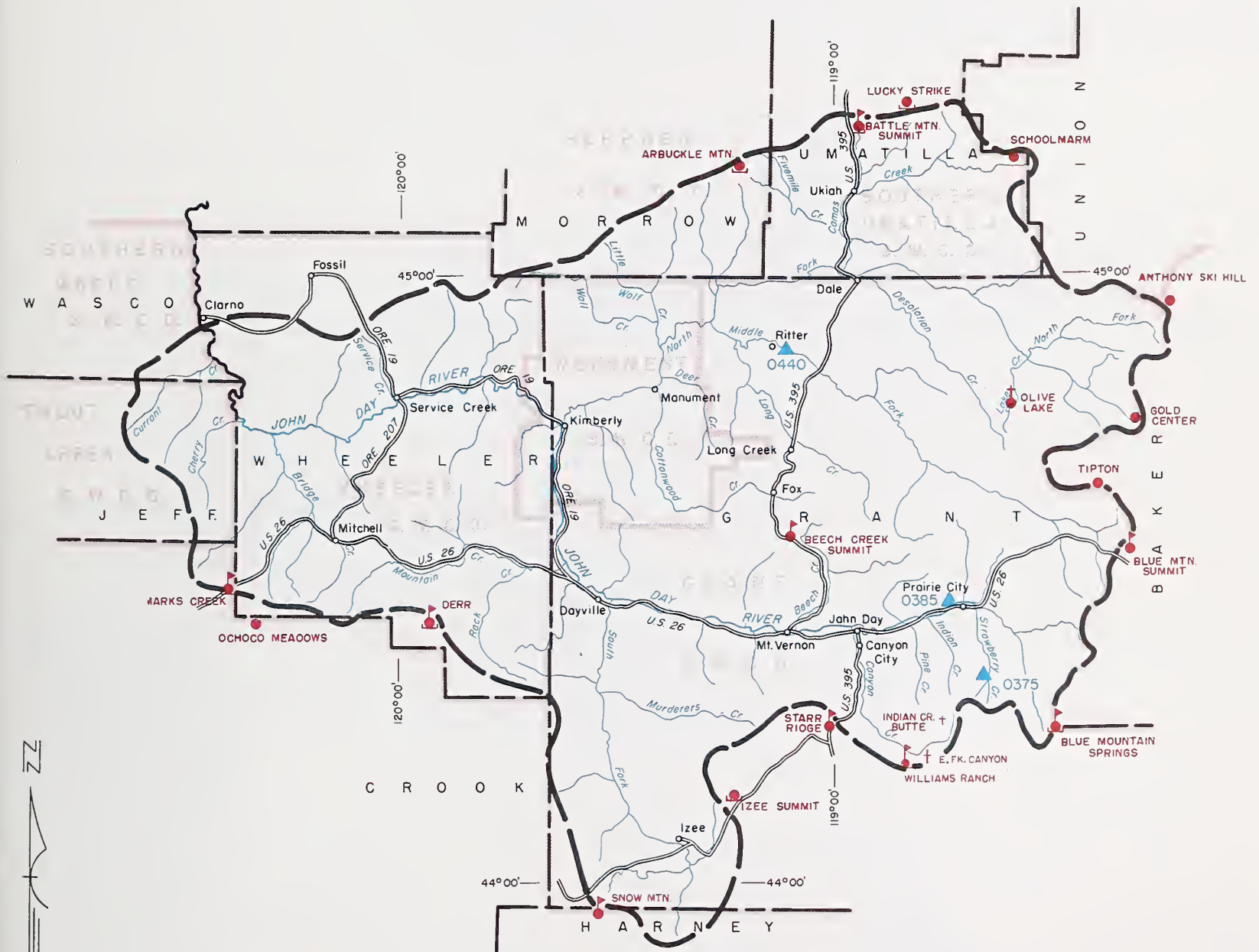
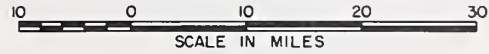
[illegible]

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average \bar{t}
Clear Lake (Wasco)	11.9	b		

[illegible]

OR-4b

UPPER JOHN DAY WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▲ Soil Moisture Station
- † Aerial Snow Depth Gage
- L Precipitation Gage





WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

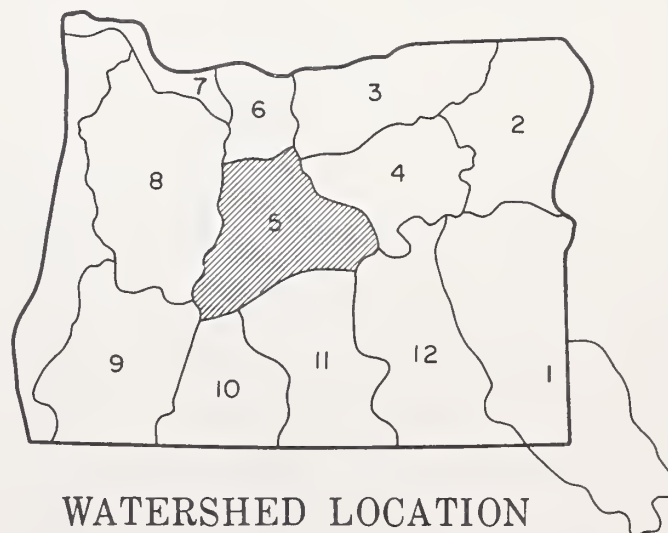
GENERAL OUTLOOK

THE OUTLOOK IS FOR BELOW AVERAGE WATER SUPPLIES ON THE DESCHUTES AND CROOKED WATERSHEDS THIS SUMMER. MOUNTAIN SNOWPACKS CURRENTLY ARE BELOW AVERAGE RANGING FROM 50% TO 75% OF NORMAL. DECEMBER PRECIPITATION WAS 150% OF AVERAGE AND SOIL MOISTURE IS ABOUT WHAT IS USUALLY MEASURED JANUARY 1. WINTER FLOW, OCTOBER TO DECEMBER, OF THE DESCHUTES AT MOODY HAS BEEN 85% OF AVERAGE. STORED WATER IS 80% OF AVERAGE ON THE DESCHUTES AND 94% OF AVERAGE ON THE CROOKED RIVER.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	
Bear Creek		
Beaver Creek		
Camp Creek		
Central Ore. Irrig. Dist.		
Crooked River		
Deschutes River		
Hay-Trout Creeks		
Lone Pine Irrig. Dist.		
Mill Creek		
North Unit Irrig. Dist.		
Ochoco Creek		
Sisters Irrigation Dist.		
Snow Creek Irrigation Dist.		
Squaw Creek Irrig. Dist.		
Swalley Ditch		
Tumalo Project		
Walker Basin Irrig. Dist.		



WATERSHED LOCATION

Report prepared by
T. A. GEORGE AND H. M. VANCE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Crane Prairie Reservoir total Inflow					
Crescent at Crescent Lake ^d					
Crooked near Post					
Deschutes at Benham Falls ^d					
Deschutes below Snow Creek					
Deschutes, Little near Lapine ^d					
Ochoco Reservoir net Inflow					
Odell near Crescent					
Squaw near Sisters					
Tumalo near Bend ^d					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

FORECAST DATE OF LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Forecasts begin in the February 1 report which will be issued about February 10, 1970.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Crane Prairie	55.3	32.4	29.4	40.2
Crescent Lake	86.9	32.2	25.9	44.3
Ochoco	47.5	17.9	2.6	19.2
Prineville	153.0	97.8	84.5	103.5
Wickiup	200.0	111.3	85.9	134.6

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Crooked R., Upper Deschutes	1	89	98

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

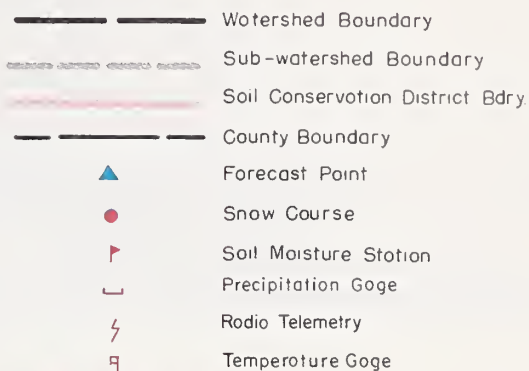
RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Little Deschutes	2	55	70
Deschutes abv. Wickiup	1	59	79
Tumalo & Squaw Cr.	2	57	74
Crooked, Ochoco	1	22	53

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



LEGEND





WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

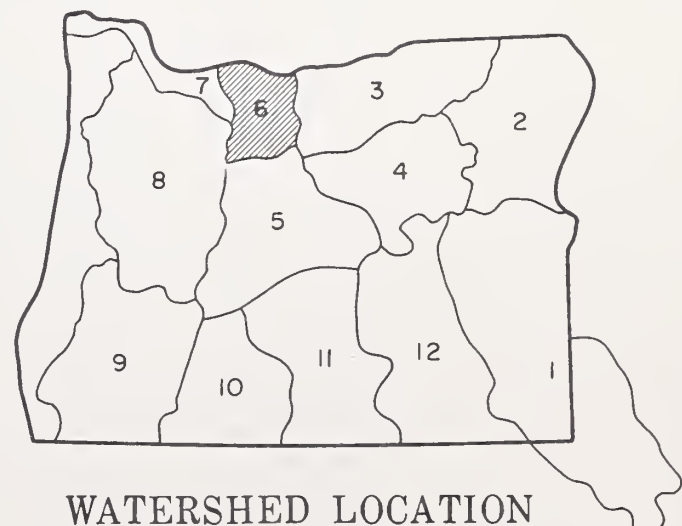
GENERAL OUTLOOK

PROSPECTS ARE FOR NEAR AVERAGE WATER SUPPLIES THIS COMING SUMMER. THE SNOWPACK AROUND MT. HOOD AND ADJACENT WATERSHEDS IS ONLY SLIGHTLY BELOW THE JANUARY 1 AVERAGE. DECEMBER PRECIPITATION WAS EXCELLENT AND SOILS ARE SLIGHTLY WETTER THAN USUAL.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrig. Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Creeks Tygh Creek White River	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



WATERSHED LOCATION

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i
Hood River near Hood River ^d					
Hood, West Fork near Dee					
White below Tygh Valley					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average i
Hood River, Mile Creeks	1	101	100

[illegible]

QR-6b

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▼ Soil Moisture Station
- ⌋ Precipitation Gage
- q Temperature Gage
- ⚡ Radio Telemetry



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

JANUARY 1, 1970



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

THE OUTLOOK IS FOR NEAR AVERAGE SUPPLIES OF WATER ON THE OREGON TRIBUTARIES OF THE LOWER COLUMBIA. THE UPPER COLUMBIA BASIN WILL HAVE BELOW AVERAGE STREAMFLOW. SNOW IN THE UPPER BASIN RANGES FROM 50% TO 80% OF NORMAL FOR JANUARY 1. THE SNOWPACK AROUND MT. HOOD IS AVERAGE. RIVER STAGES ALONG THE LOWER COLUMBIA WILL BE AVERAGE TO BELOW AVERAGE.



Report prepared by
T.A. GEORGE AND H.M. VANCE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Sandy River	2	51	86

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i
Columbia at The Dalles					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^(a) (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. — SEPT.	APR. — JUNE	MAY — JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- 50 River Miles
- Snow Course
- 9 Temperature
- ⚡ Radio Telemetry



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

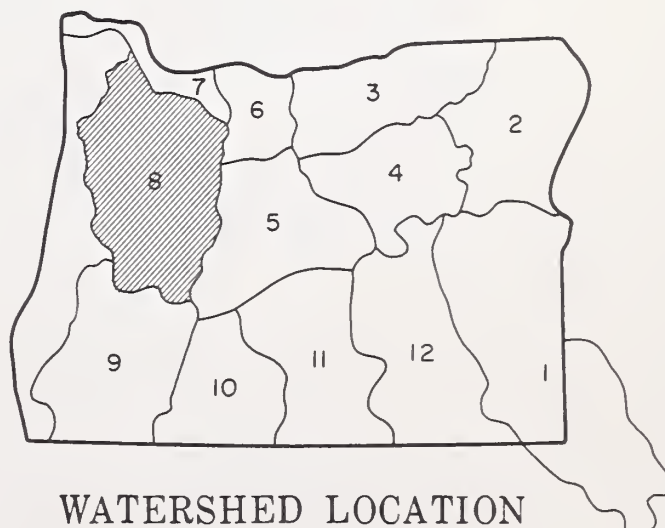
GENERAL OUTLOOK

AVERAGE WATER SUPPLIES ARE THE PROSPECT FOR THIS AREA. SNOWPACK CONDITIONS ARE NEAR NORMAL. DECEMBER PRECIPITATION WAS 113% OF AVERAGE. THE FLOW OF THE MIDDLE FORK OF THE WILLAMETTE BELOW THE NORTH FORK IS 70% OF THE OCTOBER TO DECEMBER AVERAGE. MULTIPURPOSE POWER RESERVOIRS ARE BEING HELD AT LOW LEVELS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya Clackamas McKenzie Molalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



Report prepared by
T.A. GEORGE AND H.M. VANCE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Clackamas at Big Bottom	c				
Clackamas at Estacada	c				
Clackamas above Three Lynx	c				
McKenzie at McKenzie Bridge	c				
McKenzie near Vida	c				
Oak Grove Fork above Power Intake	c	NOTE: FORECASTS BEGIN ON FEB. 1, 1970.			
Row near Dorena	c				
Santiam, North at Mehama ^d	c				
Santiam, South at Waterloo	c				
Willamette, Mid. Fk. blw. N. Fk. Nr. Oakridge ^d	c				
Willamette at Salem ^d	c				

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Clackamas	2	34	101
Santiam	4	47	86
McKenzie	3	88	78
Willamette, Mid. Fk.	3	45	77
Row	2	58	133

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cottage Grove	30.0*	0.2	0.3	2.2
Cougar	155.2*	8.8	0.2	- -
Detroit	299.9*	13.1	0.0	40.2
Dorena	70.5*	2.7	0.7	9.1
Fall Creek	115.0*	0.0	0.0	- -
Fern Ridge	94.2*	0.1	0.8	14.5
Foster	30.0*	1.4	0.5	- -
Green Peter	270.0*	10.1	1.3	- -
Hills Creek	200.0*	0.0	0.0	183.2
Lookout Point	337.2*	56.3	0.0	75.2
Timothy Lake	61.7	41.5	61.9	46.4
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

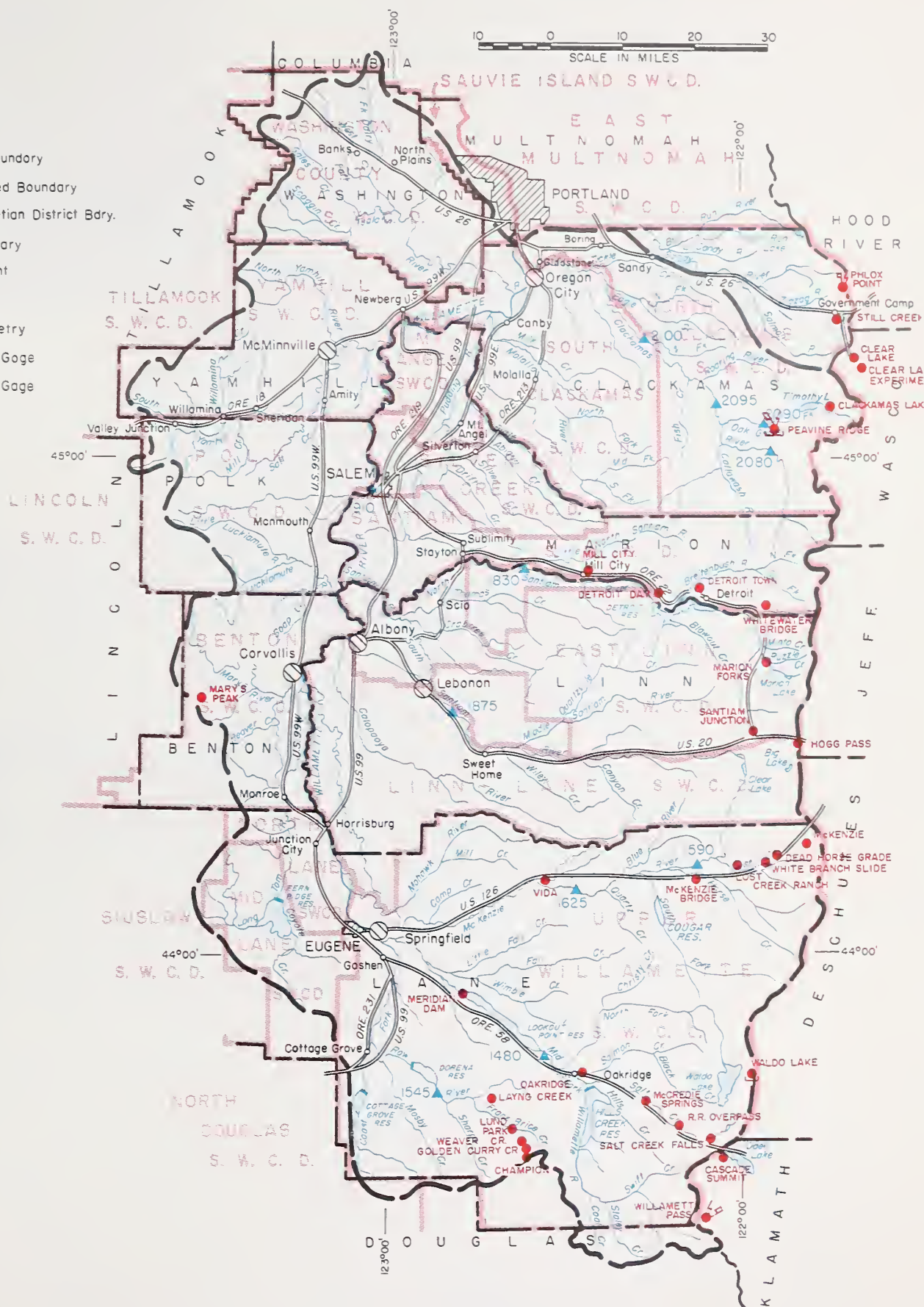
WILLAMETTE WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Radio Telemetry
- ⏏ Precipitation Gage
- ⏏ Temperature Gage



10 0 10 20 30
SCALE IN MILES





WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

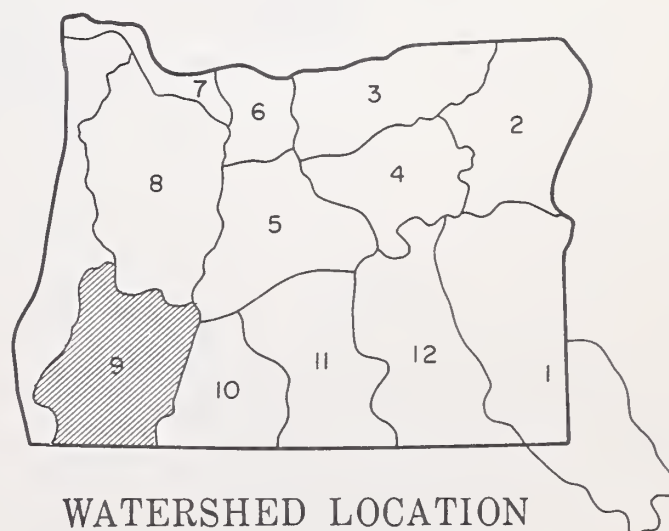
GENERAL OUTLOOK

THE PRESENT OUTLOOK IS FOR AVERAGE TO SLIGHTLY BELOW AVERAGE WATER SUPPLIES NEXT SPRING AND SUMMER FOR THIS AREA. THE SNOWPACK IS 60% TO 70% OF NORMAL IN THE CASCADES AND NEAR NORMAL IN THE SISKIYOU. PRECIPITATION DURING DECEMBER WAS 131% OF NORMAL. WATER STORED IN RESERVOIRS IS AT NORMAL LEVELS FOR JANUARY 1. THE OCTOBER TO DECEMBER FLOW OF THE ROGUE AT RAYGOLD IS 72% AND THE UMPQUA NEAR ELKTON IS 77% OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	
Applegate River, Big		
Applegate River, Little		
Ashland Creek		
Butte Creek, Big		
Butte Creek, Little		
Cow Creek		
Deer Creek		
Elk Creek		
Emigrant Creek (abv. Res.)		
Evans Creek		
Gold Hill Irrigation Dist.		
Grants Pass Irrig. Dist.		
Grave Creek		
Illinois River, East Fork		
Illinois River, West Fork		
Jump-off-Joe Creek		
Neil Creek		
Red Blanket Creek		
Rogue River		
Sucker Creek		
Table Rock Irrig. Dist.		
Thompson Creek		
Wagner Creek		
Williams Creek		



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Applegate near Copper Clearwater above Trap Creek ^d Fourmile Lake net Inflow ^d Hyatt Reservoir net Inflow ^d Illinois River near Kerby Little Butte, N. Fk. at Fish Lake nr. Lake Cr. ^d Little Butte, S. Fork near Lake Creek Note: Minimum flow will drop to 100 c.f.s. by ^c . Rogue above Prospect Rogue, South Fork near Prospect ^d Rogue below South Fork Rogue at Raygold near Central Point Rogue at Grants Pass Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d					
NOTE: FORECASTS BEGIN ON FEB. 1, 1970.					

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Forecasts begin in the February 1 report which will be issued about February 10, 1970.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Emigrant Lake	39.0	19.5	18.7	19.7*
Fish Lake	7.8	5.2	2.8	5.2
Fourmile Lake	16.1	9.0	1.2	8.8
Howard Prairie	60.0	42.3	18.9	32.8
Hyatt Prairie	16.1	11.6	7.2	9.2
*Average for years of record after reconstruction.				

SUMMARY of SNOW MEASUREMENTS

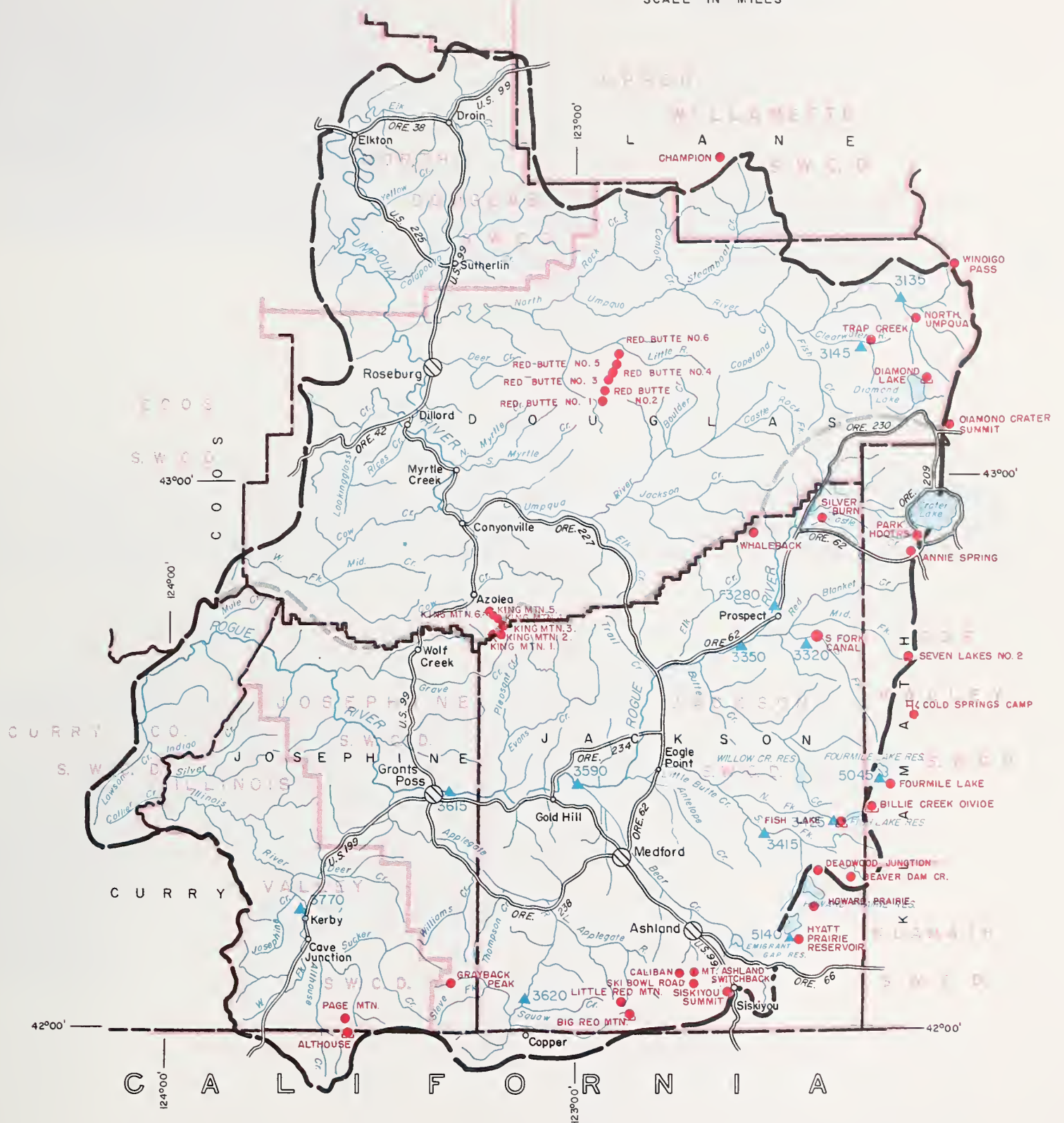
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
North Umpqua	3	51	59
Rogue	3	47	71
Butte Creek	4	28	59
Bear Creek	1	25	91

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- L Precipitation Gage
- ⚡ Radio Telemetry
- 9 Temperature Gage



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

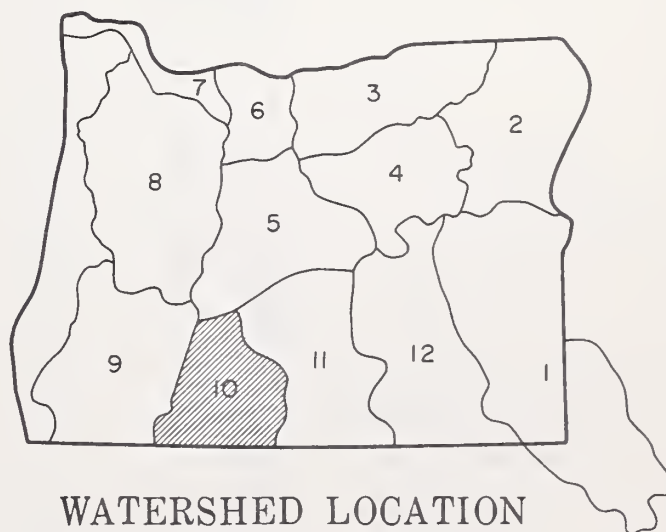
GENERAL OUTLOOK

SLIGHTLY BELOW NORMAL WATER SUPPLIES ARE THE PRESENT OUTLOOK FOR THIS AREA. THE SNOWPACK IS ABOUT 50% OF NORMAL AND NEAR AVERAGE SOIL MOISTURE CONDITIONS PREVAIL. PRECIPITATION DURING DECEMBER WAS 163% OF AVERAGE. FALL AND EARLY WINTER RUNOFF HAS BEEN BELOW AVERAGE. RESERVOIRS ARE HOLDING MORE THAN NORMAL AMOUNTS FOR JANUARY 1. THE NET INFLOW TO KLAMATH LAKE IS 82% OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <i>i</i>
Clear Lake Reservoir Inflow <i>k</i> Gerber Reservoir Inflow <i>k</i> Sprague near Chiloquin Upper Klamath Lake net Inflow <i>k</i> Williamson below Sprague River					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <i>i</i>
Upper Klamath	2	104	89

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <i>i</i>
Clear Lake	440.2	248.9	141.2	191.7
Gerber	94.0	66.3	20.3	36.4
Upper Klamath Lake	584.0	364.5	331.1	351.3

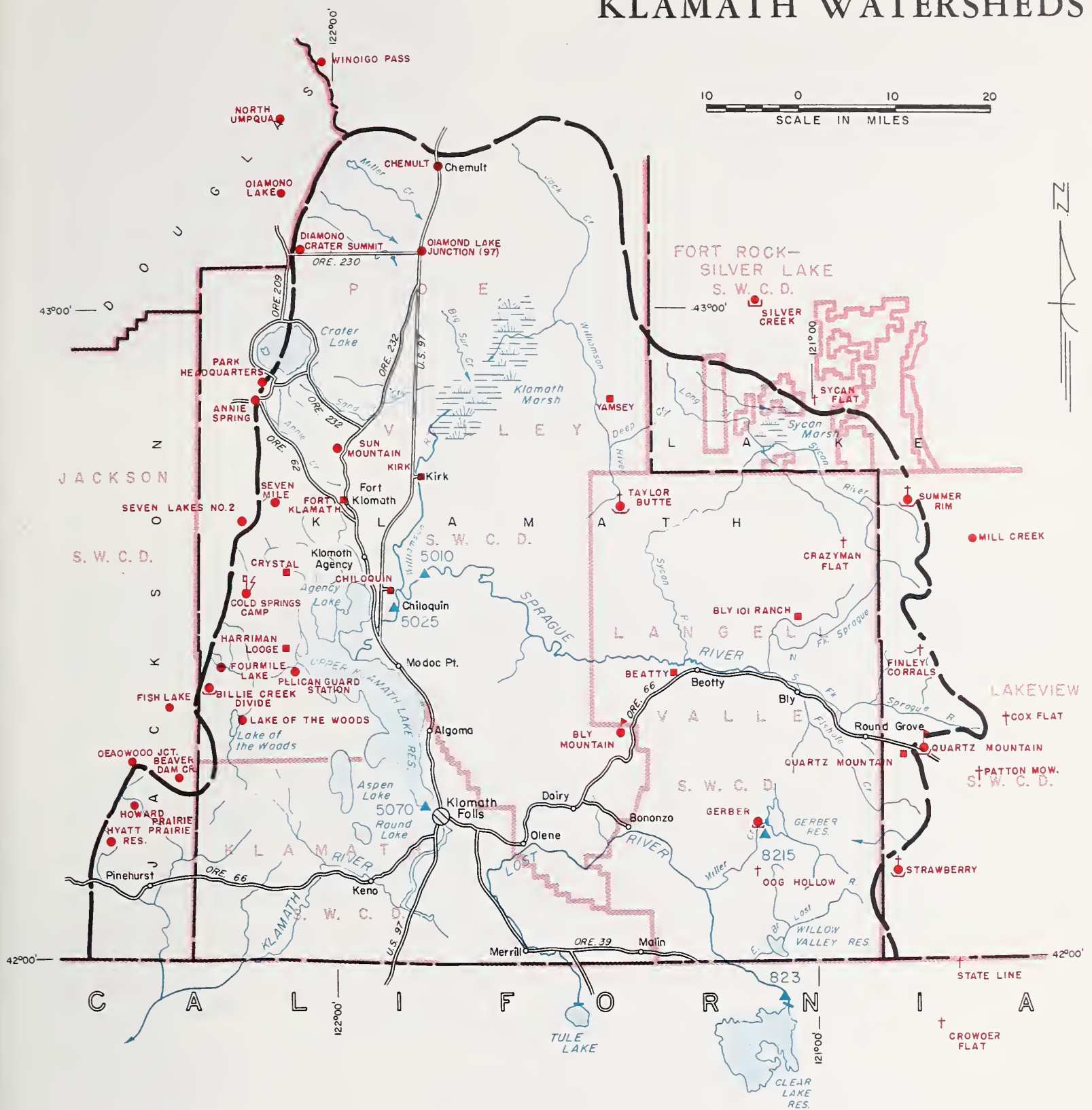
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <i>i</i>
Williamson	3	56	59
Sprague	2	31	54
Upper Klamath	7	45	57
Lost River	1	53	136

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- PP&L Snow Station
- ▼ Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry
- ⌋ Temperature Gage





WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

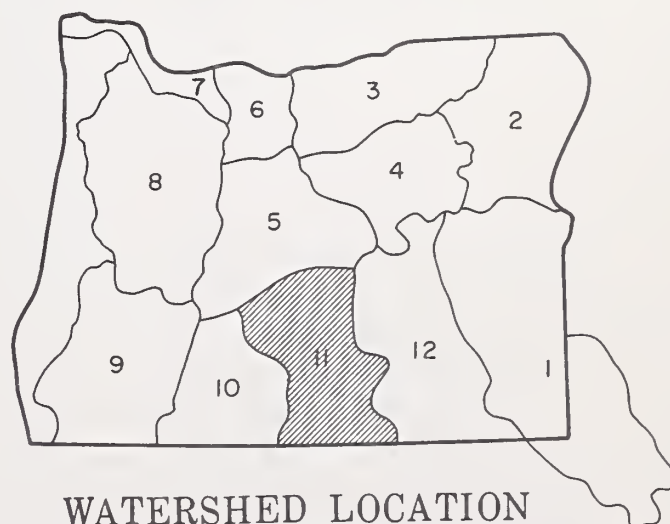
GENERAL OUTLOOK

THE JANUARY 1 SNOWPACK IS 55% TO 60% OF AVERAGE AND ABOUT 40% OF LAST YEAR. SOIL MOISTURE CONDITIONS ABOVE AVERAGE IN THE CHEWAUCAN, SILVER, AND DREW CREEK DRAINAGES AND ABOUT 60% OF AVERAGE IN THE HONEY AND DEEP CREEK DRAINAGES. THE DECEMBER PRECIPITATION IS 159% OF NORMAL. THE PRESENT OUTLOOK IS FOR SOMEWHAT RESTRICTED WATER SUPPLIES FOR NEXT SPRING AND SUMMER. JANUARY 1 STORED WATER SUPPLIES ARE 130% OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Chewaucan near Paisley Deep above Adel Drews Reservoir net Inflow ^d Honey Creek near Plush Silver Creek near Silver Lake Twentymile near Adel					
NOTE: FORECASTS BEGIN ON FEB. 1, 1970.					

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Chewaucan R., Silver Cr., Drew Creek	1	155	129
Honey, Deep, 20 Mile Crs.	1	60	62

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cottonwood	8.7	2.9	1.0	2.1*
Drews	63.0	40.1	12.4	31.0
Thompson Valley	19.5	b		11.1
*Average for years of record after reconstruction.				

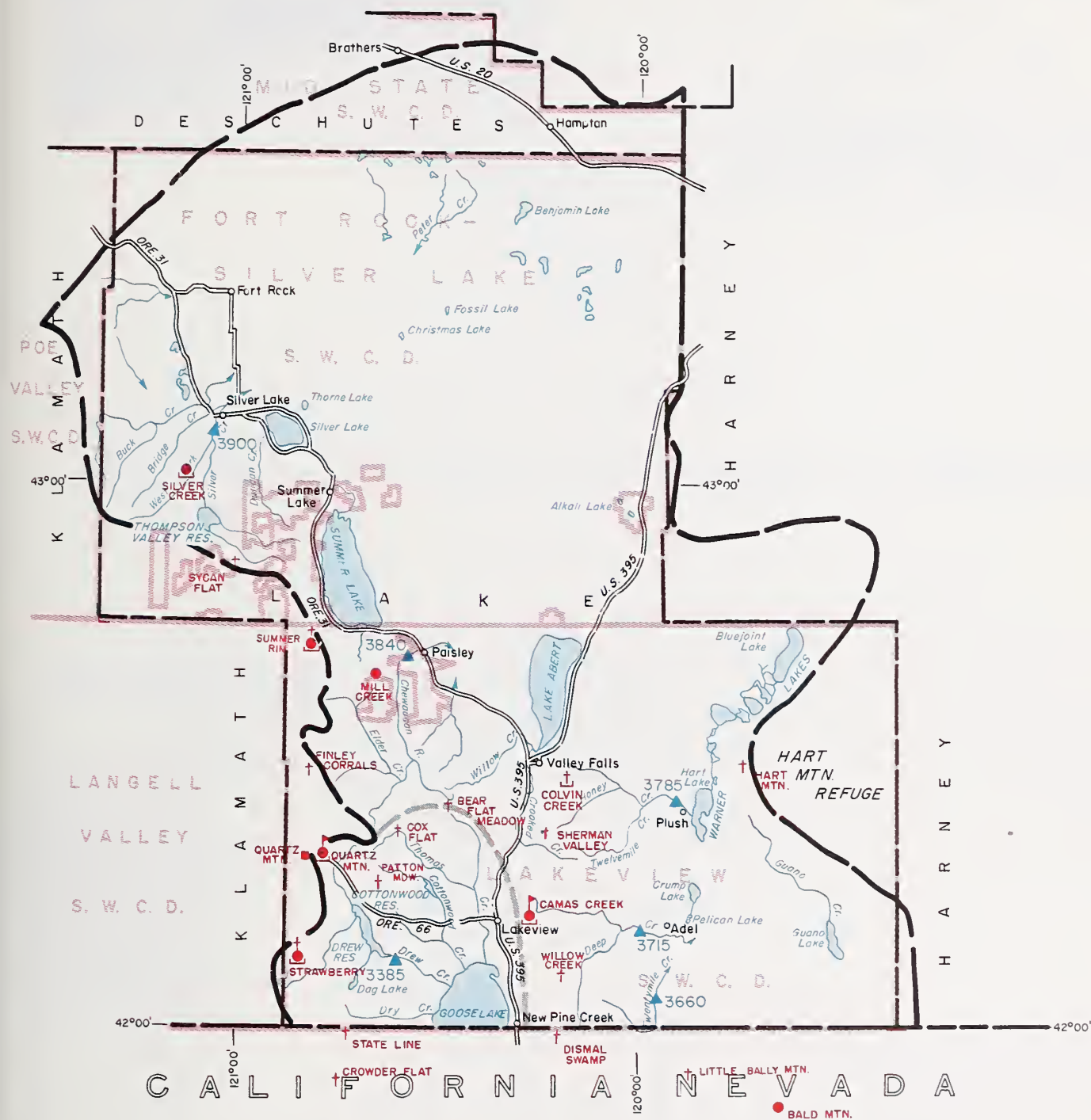
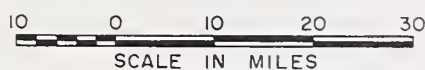
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)











RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Chewaucan	2	32	55
Honey Creek	1	42	62
Deep Creek	1	42	52
Silver Creek	2	40	52
Drew Creek	1	38	63

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



LEGEND

- | | |
|---|----------------------------------|
|  | Watershed Boundary |
|  | Sub-watershed Boundary |
|  | Sail Conservation District Bdry. |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Aerial Snow Depth Gage |
|  | PP & L Snow Station |
|  | Soil Moisture Stotion |
|  | Precipitation Gage |





WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

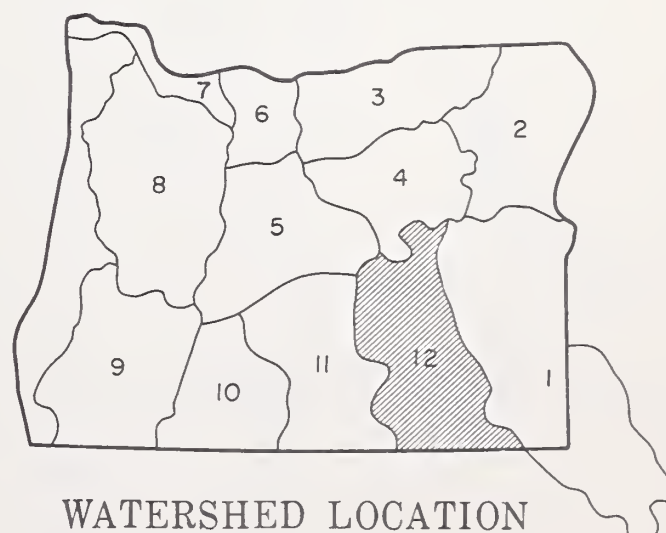
GENERAL OUTLOOK

WATER SUPPLIES WILL BE NEAR AVERAGE WITH A NEAR NORMAL SNOWPACK. SOIL MOISTURE IS 90% OF THE AVERAGE FOR JANUARY 1 AND 73% OF LAST YEAR. THE PRECIPITATION WAS 182% OF AVERAGE FOR DECEMBER.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley	Forecasts begin in the February 1 report which will be issued about February 10, 1970.	
Cow Creek		
Donner und Blitzen River		
Mill-Coffeepot Creeks		
Rattlesnake Creek		
Silver Creek		
Silvies River		
Soldier-Prather Creek		
Trout Creek		
Whitehorse Creek		



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	Last Year	Average i
Donner und Blitzen near Frenchglen Silver near Riley Silvies River near Burns Trout Creek near Denio				
NOTE: FORECASTS BEGIN ON FEB. 1, 1970.				

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average i
Silvies R., Silver Cr.	2	73	90

SUMMARY of SNOW MEASUREMENTS

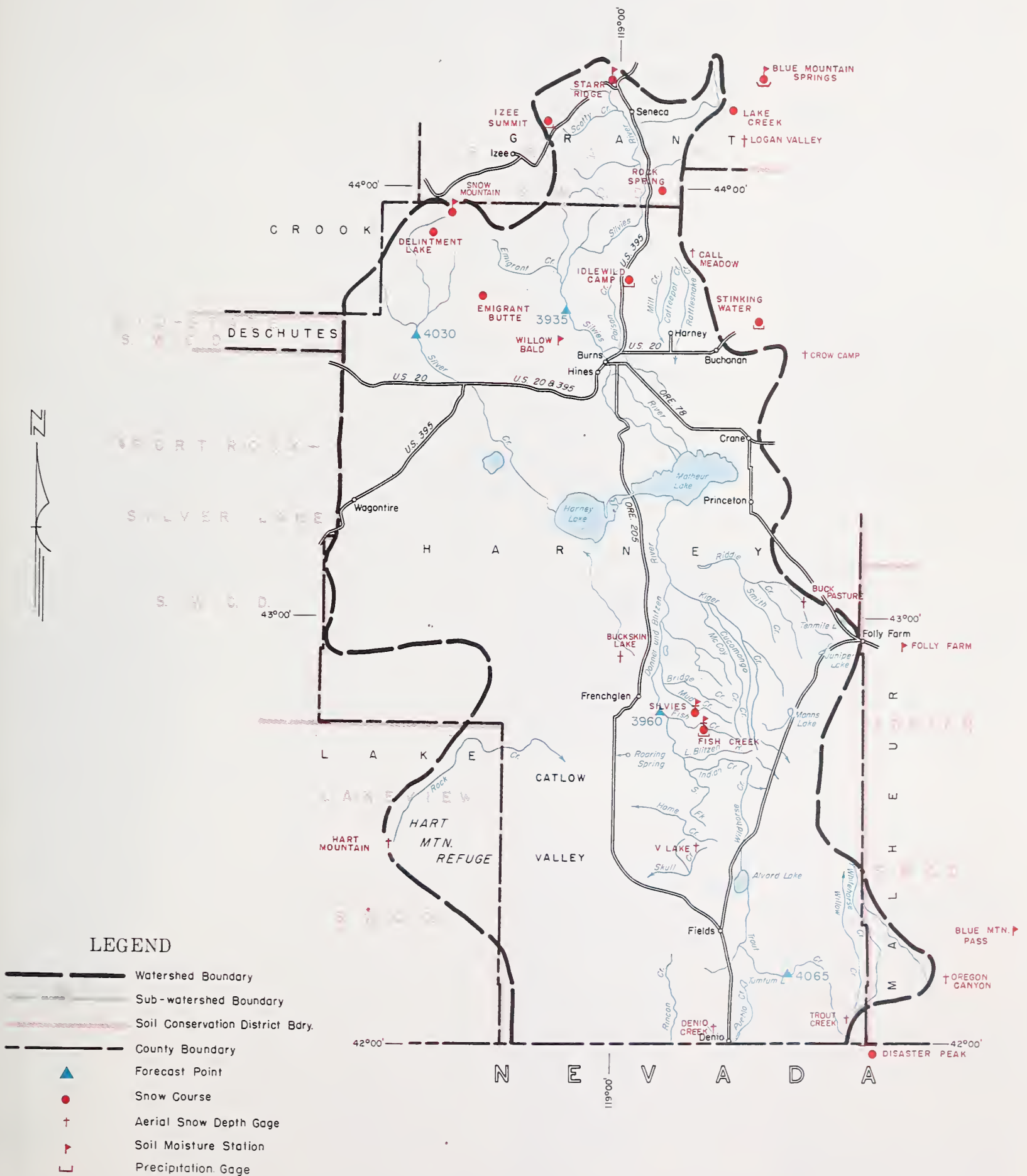
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Silvies	4	77	110
Silver Creek			
Donner und Blitzen	1	44	84

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS

10 0 10 20 30
SCALE IN MILES





BASIC DATA SUPPLEMENT 1

SNOW

SNOW	THIS YEAR			PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.†
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge	c				
Battle Creek (Ida.)	c				
Bear Creek (Nev.)	No	Report		8.8	6.6 ^h
Big Bend (Nev.)	12/29	20	3.6	5.5	2.6 ^h
Blue Mountain Springs	12/29	27	5.8	7.2	5.6 ^h
Buck Pasture	c				
Buckskin, Lower (Nev.)	c				
Buckskin, Upper (Nev.)	c				
Bull Basin (Ida.)	c				
Bully Creek	c				
Call Meadow	c				
Columbia Basin (Nev.)	c				
Cottonwood-Indian	c				
Crane Prairie	c				
Crow Camp	c				
Disaster Peak (Nev.)	c				
Eldorado Pass	12/30	14	3.2	2.1	1.2 ^h
Fawn Creek (Nev.)	c				
Fish Creek	c				
Flag Prairie	c				
Fox Creek (Nev.)	c				
Fry Canyon (Nev.)	12/30	17	3.1	6.4	2.3 ^h
Gold Creek	12/29	10	1.5	4.0	1.6 ^h
Granite Peak (Nev.)	c				
Hyde Pasture (Ida.)	c				
Jack Creek, Lower (Nev.)	c				
Jack Creek, Upper (Nev.)	c				
Jack Peak (Nev.)	c				
Lake Creek R. S.	12/29	19	3.7	5.0	3.7 ^h
Laurel Draw (Nev.)	c				
Logan Valley	c				
Lookout Butte	c				
Louse Canyon	c				
Martin Creek (Nev.)	c				
Merritt Mountain (Nev.)	c				
Midas (Nev.)	c				
Mud Flat (Ida.)	c				
Oregon Canyon	c				
Quinn Ridge (Nev.)	c				
Red Canyon (Ida.)	c				
Rock Spring	12/29	12	2.1	2.3	1.5
Rodeo Flat (Nev.)	12/30	14	2.5	5.7	2.4 ^h
76 Creek (Nev.)	c				
Silver City (Ida.)	1/5	20	4.9	7.3	4.9 ^h
Silvies	c				
South Mountain #2 (Ida.)	12/29	17	4.6	7.4	3.6 ^h
Stag Mountain (Nev.)	c				
Stinking Water	12/30	5	1.1	2.5	1.3 ^h
Succor Creek (Ida.)	c				
Taylor Canyon (Nev.)	12/31	15	2.3	3.4	1.6 ^h
Toe Jam (Nev.)	c				
Tremewan Ranch (Nev.)	12/31	6	1.0	2.8	0.4 ^h
Triangle (Ida.)	c				
Trout Creek	c				
"V" Lake	c				
Vaught Ranch (Ida.)	c				
War Eagle (Ida.)	c				

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.*
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	c	-			
Aneroid Lake #2	c				
Anthony Lake	12/30	33	8.5	12.6	11.0
Bald Mountain (Ore.)	c				
Beaver Reservoir	12/26	15	2.2	3.8	3.7 ^h
Big Sheep	c				
Blue Mtn. Summit	12/30	17	3.3	4.2	2.9
Bourne	c				
County Line	12/30	7	1.0	3.2	2.2
Dooley Mountain	12/31	15	4.5	5.0	3.1
Eilertson Meadows	12/29	18	3.8	4.6	4.4
Eldorado Pass	12/30	14	3.2	2.1	1.2 ^h
Gold Center	c				
Goodrich Lake	1/3	39	12.8	-	-
Intake House	12/29	22	4.5	5.0	-
Little Alps	12/30	19	4.2	8.7	4.8 ^h
Little Antone	12/30	18	3.5	4.5	-
Lucky Strike	c				
Meacham	12/23	6	1.4	5.0	2.5 ^h
Mirror Lake	c				
Moss Springs	12/31	28	6.7	10.6	9.0 ^h
Power Plant	12/29	16	3.8	2.6	-
Schneider Meadows	c				
Schoolmarm	12/30	7	0.9	3.0	1.8
Standley	c				
Taylor Green	c				
Tipton	12/30	18	3.8	4.3	3.8
Tollgate	12/30	34	8.2	13.4	8.1 ^h
TV Ridge	c				
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	c				
Battle Mountain Summit	12/23	2	0.3	1.4	0.9 ^m
Blue Mountain Camp	12/30	17	4.0	8.8	3.5 ^m
Emigrant Springs	12/23	3	0.4	4.2	1.8 ^h
Lucky Strike	c				
Meacham	12/23	6	1.4	5.0	2.5 ^h
Tollgate	12/30	34	8.2	13.4	8.1 ^h
Walla Walla Diversion	c				
Weston Mountain	12/30	3	0.6	0.4	-
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	12/30	33	8.5	12.6	11.0
Arbuckle Mountain	c				
Battle Mountain Summit	12/23	2	0.3	1.4	0.9 ^m
Beech Creek Summit	12/30	9	1.3	3.2	1.5 ^h
Blue Mountain Springs	12/29	27	5.8	7.2	5.6 ^h
Blue Mountain Summit	12/30	17	3.3	4.2	2.9
Derr	c				
East Fork Canyon	c				
Gold Center	c				
Indian Creek Butte	c				
Izee Summit	12/30	12	2.6	4.1	2.5 ^h
Lucky Strike	c				
Marks Creek	12/24	5	0.7	3.2	1.3 ^m
Ochoco Meadows	c				
Olive Lake	c				
Schoolmarm	12/30	7	0.9	3.0	1.8
Snow Mountain	c				
Starr Ridge	12/29	11	2.3	3.0	2.0 ^h
Tipton	12/30	18	3.8	4.3	3.8
Williams Ranch	c				

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave†
UPPER DESCHUTES, CROOKED WATERSHEDS					
Black Pine Spring	c				
Caldwell Ranch	c				
Cascade Summit	12/31	34	8.0	13.5	10.3
Chemult	1/6	11	2.2	4.9	4.1
Deer Creek	c				
Derr	c				
Hogg Pass	12/30	48	13.5	20.5	13.9
Hungry Flat	1/1	10	1.4	3.0	- -
Irish-Taylor	c				
Marks Creek	12/24	5	0.7	3.2	1.3
Mowich	c				
New Crescent Lake	c				
New Dutchman Flat #2	1/1	46	14.1	24.0	- -
Ochoco Meadows	c				
Snow Mountain	c				
Tamarack	c				
Tangent	1/1	28	6.8	9.6	- -
Three Creek Butte	c				
Three Creek Meadow	c				
Waldo Lake	c				
Willamette Pass	c				
Windigo Pass (DISCONTINUED)					
Willamette Pass Pillow	1/1		12.2		
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadows	c				
Clear Lake	12/29	15	3.2	8.4	2.6
Clear Lake (Experimental)	12/29	27	5.5	9.8	4.9
Cooper Spur	1/2	16	4.6	11.3	4.6
Cooper Spur (Alternate)	1/2	20	5.5	12.4	- -
Greenpoint Reservoir	c				
Knebal Springs	c				
Lambert Point (DISCONTINUED)					
Parkdale	1/2	T	T	4.0	1.0
Phlox Point	12/31	57	17.2	38.4	20.8
Red Hill	c				
Still Creek	12/29	26	6.8	19.0	7.1
Switchback	No Report			8.4	- -
Tilly Jane	c				
Ulrich Ranch Junction	c				
Umbrella Falls	1/1	61	17.7	33.8	- -
Upper Valley	1/2	14	3.8	8.9	2.7

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.*
WILLAMETTE WATERSHEDS					
Cascade Summit	12/31	34	8.0	13.5	10.3
Cascade Summit Alternate	No Report			12.2	- -
Champion	12/31	38	9.7	17.1	7.7 ^h
Clackamas Lake	c				
Clear Lake	12/29	15	3.2	8.4	2.6 ^h
Clear Lake (Experimental)	12/29	27	5.5	9.8	4.9 ^h
Dead Horse Grade	1/2	19	4.0	4.9	6.5 ^h
Detroit Town	12/30	0	0.0	1.8	0.6
Detroit Dam	12/30	0	0.0	1.3	0.3
Golden Curry Creek	12/31	12	2.4	3.6	1.4 ^h
Hogg Pass	12/30	48	13.5	20.5	13.9
Layng Creek	12/31	0	0.0	0.0	0.1 ^h
Lost Creek Ranch	1/2	0	0.0	2.7	1.3 ^h
Lund Park	12/31	0	0.0	0.0	0.0 ^m
Marion Forks	12/30	7	2.1	9.0	4.0 ^h
Marys Peak	c				
McCredie Springs	12/31	0	0.0	2.6	0.1
McKenzie	1/2	47	13.1	15.1	17.9 ^h
McKenzie Bridge	1/2	0	0.0	1.5	0.5 ^h
Meridian Dam	12/31	0	0.0	T	0.0 ^h
Mill City	12/30	0	0.0	T	0.2
Oakridge	12/31	0	0.0	T	T ^h
Peavine Ridge	12/30	19	4.3	- -	4.8 ^h
Phlox Point	12/31	57	17.2	38.4	20.8
Railroad Overpass	12/31	3	0.4*	4.2	0.5 ^m
Salt Creek Falls	12/31	17	3.4	8.3	4.6
Santiam Junction	12/30	31	7.4	15.0	7.7 ^h
Still Creek	12/29	26	6.8	19.0	7.1
Vida	1/2	0	0.0	0.0	0.2 ^h
Waldo Lake	c				
Weaver Creek	12/31	0	0.0	0.0	0.2 ^m
White Branch Slide	1/2	15	3.5	3.4	2.2 ^h
Whitewater Bridge	12/30	3	0.9	5.4	1.5 ^h
Willamette Pass	c				
Willamette Pass Pillow	1/1		12.2		
*Estimated.					

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave†
ROGUE, UMPQUA WATERSHEDS					
Althouse	c				
Annie Spring	12/30	55	15.6	22.4	14.9
Beaver Dam Creek	12/31	14	2.5	11.9	4.6
Big Red Mountain	c				
Billie Creek Divide	12/29	25	5.6	12.0	7.3
Caliban	c				
Champion	12/31	38	9.7	17.1	7.7
Cold Springs Camp	c				
Deadwood Junction	12/31	12	1.5	9.2	3.3
Diamond-Crater Summit	12/29	41	10.7	12.8	14.0
Diamond Lake	12/29	28	5.4	7.6	8.2
Fish Lake	12/30	17	2.8	10.6	5.3
Fourmile Lake	12/29	34	9.4	-	8.7
Grayback Peak	c				
Howard Prairie	12/31	9	2.1	8.5	3.2
Hyatt Prairie Reservoir	12/31	10	1.2	8.3	3.1
King Mountain #1	12/30	20	4.1	7.3	-
King Mountain #2	12/30	15	2.5	4.3	-
King Mountain #3	12/30	5	1.0	3.8	-
King Mountain #4	12/30	T	T	T	-
King Mountain #5	12/30	0	0.0	T	-
King Mountain #6	12/30	0	0.0	0.0	-
Little Red Mountain	c				
Mt. Ashland Switchback	c				
North Umpqua	12/29	19	3.3	7.6	6.1
Page Mountain	c				
Park Headquarters	12/30	74	21.2	29.3	21.6
Red Butte #1	12/28	25	3.8	7.8	4.3
Red Butte #2	12/28	20	3.6	3.3	0.6
Red Butte #3	12/28	14	1.7	1.8	-
Red Butte #4	12/28	10	0.8	1.3	-
Red Butte #5	12/28	7	1.2	0.9	2.2
Red Butte #6	12/28	T	T	T	-
Seven Lakes #1 (DISCONTINUED)					
Seven Lakes #2	c				
Seven Mile (New Course)	c				
Silver Burn	1/2	15	3.1	10.5	4.4
Siskiyou Summit	12/30	11	2.2	8.8	2.4
Siskiyou Summit (Alternate #2 - New Course)	12/30	10	2.1	-	-
Ski Bowl Road	c				
South Fork Canal	1/2	6	1.7	3.9	1.3
Trap Creek	12/30	13	2.1	6.1	4.1
Whaleback	c				
Windigo Pass (DISCONTINUED)					

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.*
KLAMATH WATERSHEDS					
Annie Spring	12/30	55	15.6	22.4	14.9 ^h
Betty (PP&L)	12/31	3	0.4	1.5	0.2 ^m
Billie Creek Divide	12/29	25	5.6	12.0	7.3 ^h
Bly Mountain	12/22	0	0.0	2.6	2.7 ^h
Bly 101 Ranch (PP&L)	12/31	6	0.7	-	0.7
Chemult	1/6	11	2.2	4.9	4.1
Chiloquin (PP&L)	12/31	4	0.6	-	0.7
Cold Springs Camp	c				
Cold Springs Camp Pillow	1/1		5.9		
Crazyman Flat	c				
Crowder Flat (Calif.)	c				
Crystal (PP&L)	12/31	6	1.1	7.9	3.5 ^h
Diamond-Crater Summit	12/29	41	10.7	12.8	14.0 ^h
Diamond Lake Junction (97)	12/29	10	1.4	3.5	2.0 ^h
Dog Hollow	c				
Finley Corrals	c				
Fort Klamath (PP&L)	12/29	5	0.6	4.1	1.3 ^h
Fourmile Lake	12/29	34	9.4	-	8.7 ^h
Gerber	1/1	4	1.5	2.8	1.1 ^h
Harriman (PP&L)	12/31	8	1.2	1.8	1.3 ^h
Hyatt Prairie Reservoir	12/31	10	1.2	8.3	3.1 ^h
Kirk (PP&L)	12/30	12	2.6	4.5	2.8 ^m
Lake of the Woods	12/29	10	1.4	7.5	5.1 ^h
Park Headquarters	12/30	74	21.2	29.3	21.6 ^h
Pelican Guard Station	12/22	0	0.0	3.8	1.4 ^h
Quartz Mountain	12/30	9	1.5	4.0	2.4
Quartz Mtn. (Extension)	12/30	9	2.0	4.0	-
Quartz Mountain (PP&L)	12/30	12	2.6	4.9	2.4 ^m
Seven Lakes #1 (DISCONTINUED)	c				
Seven Lakes #2	c				
Seven Mile (NEW COURSE)	c				
State Line (Calif.)	c				
Strawberry	c				
Summer Rim	c				
Sun Mountain	12/30	27	5.8	12.1	8.5
Sycan Flat	c				
Taylor Butte	12/23	9	0.9	2.7	2.0 ^h
Yamsey (PP&L - DISCONTINUED)	c				
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	c				
Bald Mountain (Nev.)	c				
Bear Flat Meadow	c				
Camas Creek	12/30	13	2.1	5.0	3.4 ^m
Cedar Pass (Calif.)	c				
Colvin Creek	c				
Cox Flat	c				
Crane Mountain	c				
Crowder Flat (Calif.)	c				
Dismal Swamp (Calif.)	c				
Finley Corrals	c				
Hart Mountain	c				
Little Bally Mountain (Nev.)	c				
Patton Meadows	c				
Quartz Mountain (PP&L)	12/30	12	2.6	4.9	2.4 ^m
Quartz Mountain	12/30	9	1.5	4.0	2.4
Quartz Mountain (Ext.)	12/30	9	2.0	4.0	-
Sherman Valley	c				
Silver Creek	12/31	5	0.9	1.8	1.4 ^h
State Line (Calif.)	c				
Strawberry	c				
Summer Rim	c				
Sycan Flat	c				

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.†
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	12/29	27	5.8	7.2	5.6h
Buck Pasture	c				
Buckskin Lake	c				
Call Meadows	c				
Crow Camp	c				
Delintment Lake	c				
Denio Creek	c				
Disaster Peak (Nev.)	c				
Emigrant Butte	c				
Fish Creek	c				
Hart Mountain	c				
Idlewild Camp	12/29	9	1.3	1.8	1.4h
Izee Summit	12/30	12	2.6	4.1	2.5h
Lake Creek R. S.	12/29	19	3.7	5.0	3.7h
Lake Creek (New Tangent)	12/29	18	3.9	4.9	- -
Oregon Canyon	c				
Rock Spring	12/29	12	2.1	2.3	1.5
Silvies	c				
Snow Mountain	c				
Starr Ridge	12/29	11	2.3	3.0	2.0h
Stinking Water	12/30	5	1.1	2.5	1.3h
Trout Creek	c				
"V" Lake	c				

SNOW

[illegible]

BASIC DATA SUPPLEMENT 2

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average *
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8				
Big Bend (Nev.)	6700	48	16.7	12/29	11.7	16.0	15.4
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Crane Prairie	5375	48	18.2				
Folly Farm	4450	30	12.5				
Jack Creek, Lower (Nev.)	6800	48	8.6				
Jordan Valley	4390	48	19.3	No Report		14.3	14.6
Mud Flat (Ida.)	5500	48	12.8				
Rodeo Flat (Nev.)	6800	42	11.0	12/30	4.3	10.7	10.3
Stinking Water Summit (DISCONTINUED)							
Taylor Canyon (Nev.)	6200	48	15.1	12/30	9.2	12.4	13.2
Triangle (Ida.)	5150	48	16.6				
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	12/30	9.0	- -	9.2
Dooley Mountain	5430	36	9.2	12/31	2.5	2.5	3.7
Emigrant Springs	3925	48	22.3	12/23	21.2	19.5	17.2
Ladd Summit	3730	48	18.9	12/30	10.1	9.7	9.8
Moss Springs	5850	36	25.8	12/31	14.0	14.6	- -
Tollgate	5070	48	23.6	12/30	14.9	18.1	19.7
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Athena-Weston (DISCONTINUED)							
Battle Mountain Summit	4340	48	13.8	12/23	12.4	12.9	11.5
Emigrant Springs	3925	48	22.3	12/23	21.2	19.5	17.2
Tollgate	5070	48	23.6	12/30	14.9	18.1	19.7
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/23	12.4	12.9	11.5
Beech Creek	4800	48	21.3	12/30	8.8	10.1	10.9
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Blue Mountain Summit	5100	36	16.8	12/30	9.0	- -	9.2
Derr	5670	24	9.0				
Marks Creek	4540	36	14.1	12/24	9.8	11.0	10.2
Snow Mountain	6300	48	16.7				
Starr Ridge	5150	36	10.6	12/29	7.8	10.6	8.8
Williams Ranch	4500	42	17.9	12/30	16.6	17.7	16.3
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0				
Marks Creek	4540	36	14.1	12/29	9.8	11.0	10.2
Snow Mountain	6300	48	16.7				
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	1/2	14.2	14.0	- -
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	12/22	9.7	9.1	10.4
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	12/31	11.5	12.2	11.9
Quartz Mountain	5320	48	15.3	12/30	7.4	7.4	8.9

BASIC DATA SUPPLEMENT 2

SOIL MOISTURE

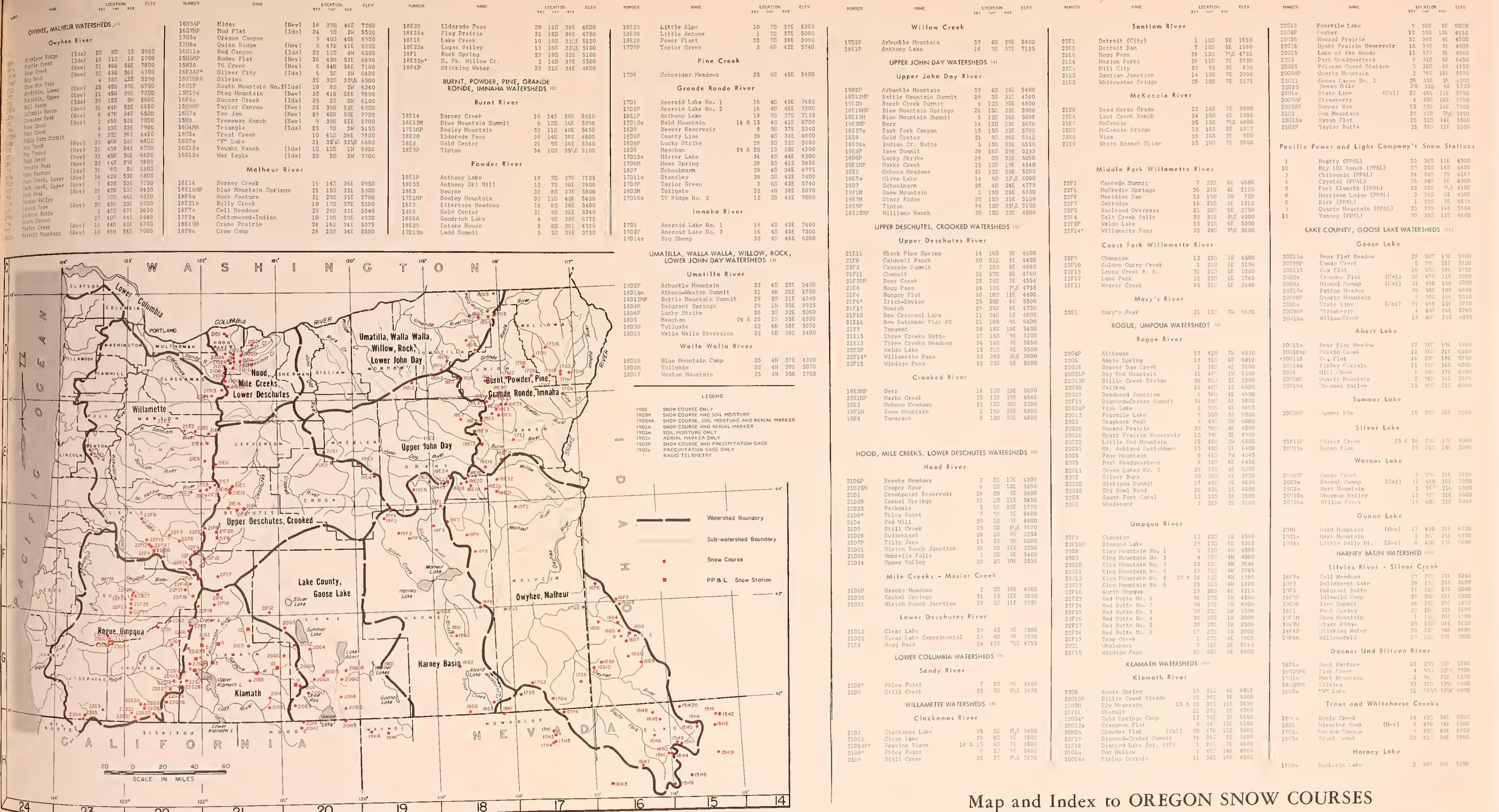
DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average *
HARNEY BASIN WATERSHEDS							
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Fish Creek	7900	48	15.0				
Folly Farm	4450	30	12.5				
Silvies	6900	48	16.4				
Snow Mountain	6300	48	16.7				
Starr Ridge	5150	36	10.6	12/29	7.8	10.6	8.8
Stinking Water (DISCONTINUED)							
Willow-Bald	5000	24	6.6	12/30	4.3	6.0	4.7
*Average for years of record--for stations with as much as 6 years of record or more.							

BASIC DATA SUPPLEMENT 3

PRECIPITATION (Inches)

PRECIPITATION (Inches)		CURRENT INFORMATION		PAST RECORD	
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precipitation	Last Year	Average *
Anthony Lake (Baker County)	7150	11/25 to 12/29	6.07		
Camas Creek (Lake County)	5825	11/26 to 12/30	5.95		
County Line (Umatilla County)	4800	12/5 to 12/30	2.10		
Dooley Mountain (Baker County)	5200	11/19 to 12/18	1.25		
Granite Mountain (Grant County)	5900	11/17 to 12/16	2.30		
Marks Creek (Crook County)	4540	11/25 to 12/24	3.85		
Quartz Mountain Summit (Lake County)	5530	11/26 to 12/30	6.37		
Taylor Butte (Klamath County)	5040	10/4 to 12/23	8.21		





Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

OFFICIAL BUSINESS

Return this entire sheet to above address, if you do NOT wish to receive this material ☐, or if change of address is needed ☐ (indicate change/s in address below, including ZIP code).



POSTAGE AND FEES PAID
U.S. DEPARTMENT OF AGRICULTURE

FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*

U. S. Dept. of Agriculture
National Agricultural Library
Current Serial Record
Washington, D. C. 20250